



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,581	07/28/2003	Christopher James Newton Fryer	19727.0004	4121

7590 08/09/2005

Daniel J. Warren
SUTHERLAND ASBILL & BRENNAN LLP
999 Peachtree Street, NE
Atlanta, GA 30309-3996

EXAMINER

VU, JIMMY T

ART UNIT	PAPER NUMBER
----------	--------------

2821

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

Office Action Summary	Application No. 10/628,581	Applicant(s) FRYER ET AL.	
	Examiner Jimmy T. Vu	Art Unit 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 10-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-6, 10, 15-17 and 21-23 is/are rejected.
- 7) ☒ Claim(s) 7, 11-14 and 18-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/5/04, 12/27/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-7 and 10-23 have been considered but are moot in view of the new ground(s) of rejection.

Despite applicant's disagreement, the examiner decides to provide new rejection as below.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4-6, 10, 15-17 and 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Tomio (U.S. Patent number 5,745,085).

Regarding claim 1, Tomio discloses a display controller (34, 40) (Figs. 1-19) for use with an electroluminescent display (30), the controller being arranged to vary the relative phase of signals applied to illuminated segment(s) (182) (Figs. 18 and 19) of the display whereby the brightness of the segment(s) can be varied, wherein the controller further comprises a look-up table (col. 10, lines 20-25) which provides a pattern of drive signals and a cycle state counter (54, 57) which is connected to the look-up table, the look-up table in turn being connected to memory (42) containing segment data (Figs. 1-19, col. 8, lines 1-65, col. 10, lines 1-65).

Regarding claim 4, Tomio discloses a display controller wherein there are provided at least sixteen levels of brightness (Fig. 18, col. 12, lines 20-25).

Regarding claim 5, Tomio discloses a display controller wherein there are provided at least thirty-two levels of brightness (Fig. 19, col. 12, lines 25-30).

Regarding claim 6, Tomio discloses a display controller arranged to provide separate control of the phase of a plurality of signals for controlling a corresponding plurality of segment of a multi-segment display (Figs. 1-19).

Regarding claim 10, Tomio discloses a display controller being arranged to illuminate a plurality of different segments simultaneously such that the segments are driven using drive signal patterns that are substantially out of phase with each other (Figs. 1-19).

Regarding claim 15 and 21, Tomio discloses an electroluminescent display in combination with the controller (Figs. 1-19).

Regarding claim 16, 17 and 22, the method steps are necessitated by the device structure as it is disclosed by Tomio.

Regarding claim 23, Tomio discloses a display controller (34, 40) (Figs. 1-19) for use with an electroluminescent display (30), the controller being arranged to illuminate and vary the brightness of a plurality of segments (182) of the display by varying the relative phase of signals applied to the illuminated segments such that drive signals used to drive the segments are substantially out of phase with each other (Figs. 1-19, col. 10, lines 1-65).

Allowable Subject Matter

3. Claims 2, 3, 7, 11-14, and 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

None of the prior art teaches the display controller wherein the controller controls the phase of the signals on a cycle-by-cycle basis such that it applies drive signals to the or each segment which are either in phase or in anti-phase with a common signal applied to that segment, whereby the proportion of the signals that are in anti-phase determines the brightness of the segment.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy T Vu whose telephone number is (571) 272-1832. The examiner can normally be reached on M - F: 9 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2800.

Jimmy Vu
July 25, 2005


TUYET VO
PRIMARY EXAMINER